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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,961	07/21/2005	Christopher Neil Wood	038665.56621US	2045
23911 7590 05/03/2007 CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			EXAMINER AMIRI, NAHID	
			ART UNIT 3679	PAPER NUMBER
			MAIL DATE 05/03/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/542,961	WOOD ET AL.	
	Examiner	Art Unit	
	Nahid Amiri	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/21/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

abstract

The abstract of the disclosure is objected to because reference numbers are not in parentheses. Correction is required. See MPEP § 608.01(b).

Claim Objections

Claim 12 is objected to because of the following informalities:

Claim 12, line 1, "An" should be changed to --A--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

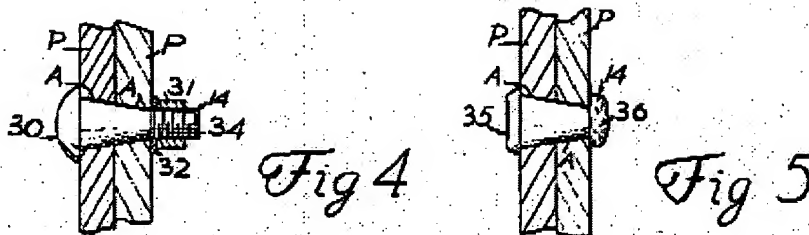
The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 3,369,440 King, Jr.

With respect to claim 1, King, Jr. discloses an assembly (Figs. 4-5) comprising a fastener (30), a panel (P) and a supporting structure (P) to which the panel (P) is detachably fastened by the fastener (30), the panel (P) and supporting structure (P) being formed with tapered holes (A) which receive the fastener (30), the taper of one hole (A) being a continuation of the taper (A) of the other, and the fastener (30) urging a tapered surface into the tapered holes (A) in a non-jamming manner thereby locating the panel (P) with respect to the supporting structure (P).

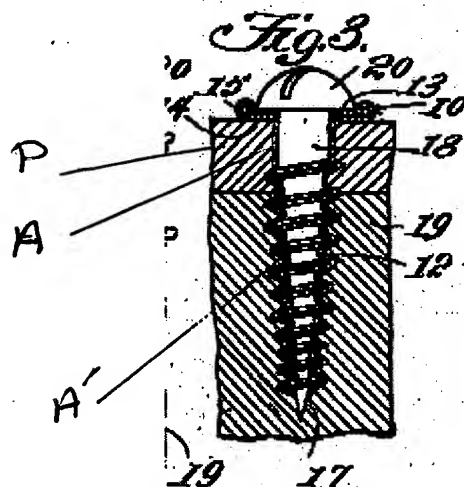


With respect to claims 2, 3, and 6, respectively, King, Jr. discloses (Figs. 4-5) that the fastener (30) is positioned in the holes so as not to project beyond an external surface of the panel (P); wherein the tapered surface is formed on the fastener (30) itself; and wherein the angle of taper of the holes (A) and the angle of taper of the said tapered surface are the same.

With respect to claim 10, King, Jr. discloses a fastener (Figs. 4-5) for fastening a detachable panel (P) to a supporting structure (P), the panel (P) and supporting structure (P) being formed with tapered holes (A) which receive the fastener (30), the taper of one hole (A) being a continuation of the taper (A) in the other, the fastener (30) comprising a body having a tapered outer surface which is arranged to locate in the tapered holes (A) in a non-jamming manner and thereby position the panel (P) with respect to the supporting structure (P).

Claims 1-4, 6, 10, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 2,666,354 Dim et al.

With respect to claim 1, Dim et al. disclose an assembly (Fig. 3) comprising a fastener (18), a panel (P) and a supporting structure (19) to which the panel (P) is detachably fastened by the fastener (19), the panel (P) and supporting structure (19) being formed with tapered holes (A, A') which receive the fastener (18), the taper of one hole (A) being a continuation of the taper (A') of the other, and the fastener (18) urging a tapered surface into the tapered holes (A, A') in a non-jamming manner thereby locating the panel (P) with respect to the supporting structure (19).



With respect to claims 2, 3, 4, and 6, respectively, Dim et al. disclose (Fig. 3) that the tapered surface is formed on the fastener (18) itself; wherein the tapered surface is formed on an element (12) located in the tapered holes (A, A'), and the fastener (18) passing through the element (12) to hold the element (12) in place; wherein the angle of taper of the holes (A, A') and the angle of taper of the said tapered surface are the same.

With respect to claim 10, Dim et al. disclose a fastener (Fig. 3) for fastening a detachable panel (P) to a supporting structure (19), the panel (P) and supporting structure (19) being formed with tapered holes (A, A') which receive the fastener (18), the taper of one hole (A) being a continuation of the taper (A') in the other, the fastener (18) comprising a body having a tapered outer surface which is arranged to locate in the tapered holes (A, A') in a non-jamming manner and thereby position the panel (P) with respect to the supporting structure (19).

With respect to claim 12, Dim et al. disclose a fastener means (Fig. 3) for fastening a detachable panel (P) to a supporting structure (19), the fastening means comprising a tapered element (12) and a fastener (18), the panel (P) and supporting structure (19) being formed with tapered holes (A, A') which receive the tapered element (12) and the fastener (18), the taper of one hole (A) being a continuation of the taper in the other (A'), the tapered element (12) comprising a body having a tapered outer surface and having bore through which the fastener (18) can be passed to secure the tapered element (12) in the tapered holes (A, A') and thereby position the panel (P) with respect to the supporting structure (19).

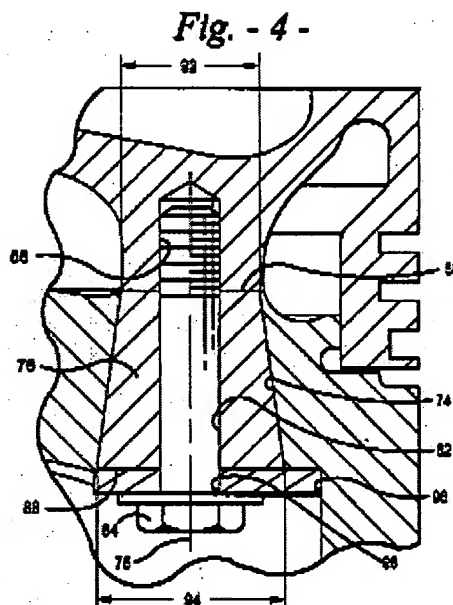
Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over King Jr. as applied to claims 1-3, 6, and 10 above, and further in view of US Patent No. 6,164,261 Kruse.

With respect to claims 4 and 5, King, Jr. discloses the claimed invention except that the tapered surface is formed on an element located in the tapered holes, and the fastener passing through the element to hold the element in place; and wherein the element is of frusto-conical form. Kruse teaches an assembly (Fig. 4) having a tapered surface is formed on an element (76) located in the tapered hole and a fastener (84) passing through the element to hold the element in place and the element (76) is of frusto-conical form. It would have been obvious to one of ordinary skill in the art at the time of invention was made to form the tapered surface of King, Jr. on an element located in the tapered hole as taught by Kruse in order to provide adequate stiffness for joining the two members together.



Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over King, Jr.

With respect to claims 7 and 8, King, Jr. discloses the claimed invention except that the angle of taper of the tapered surface is in the range of 5 to 45 degrees; and wherein the angle of taper is substantially 30 degrees. Fig. 1 of King, Jr. clearly shows that the tapered angles possess angles that are within the tapered angle range of 5 to 45 degrees and, while not specifically disclosed, appears to suggest approximately 30 degrees from the figures. Nevertheless, it is expected that one of ordinary skill in the art would routinely experiment to arrive at the optimum or workable values when the general conditions are known in the art. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of invention was made through routine experimentation and optimization to provide a respective taper angle of 30 degrees to King, Jr. because one of ordinary skill is expected to routinely experiment to find the optimum values for a particular application and the selection of 30 degrees produces no new and unexpected results.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dim et al.

With respect to claims 7 and 8, Dim et al. disclose the claimed invention except that the angle of taper of the tapered surface is in the range of 5 to 45 degrees; and wherein the angle of taper is substantially 30 degrees. Fig. 1 of King, Jr. clearly shows that the tapered angles possess angles that are within the tapered angle range of 5 to 45 degrees and, while not specifically disclosed, appears to suggest approximately 30 degrees from the figures. Nevertheless, it is expected that one of ordinary skill in the art would routinely experiment to arrive at the optimum or workable values when the general conditions are known in the art. Accordingly, it would have been obvious to one of ordinary skill in the art at the time of invention was made through routine experimentation and optimization to provide a respective taper angle of 30 degrees to Dim et al. because one of ordinary skill is expected to routinely experiment to find the optimum values for a particular application and the selection of 30 degrees produces no new and unexpected results.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


The prior art of record US Patent No. 2,237,338 Dale; US Patent No. 3,748,948 Schmitt; US Patent No. 3,034,611 Zenzic; US Patent No. 2,233,820 Pavlecka; US Patent No. 4,159,666 Briles; US Patent No. 5,868,356 Giedris; US Patent No. 4,493,141 Krezak; US Patent No. Re. 30,997 Briles; US Patent No. 6,010,274 Abouzahr; US Patent No. 3,840,980 Auriol; US Patent No. 744,559 Kendrick; US Patent No. 5,641,257 Bernstein; US Patent No. 2,449,846 Gilman; US Patent No. 6,244,806 B1 Kato; US Patent No. 2,884,099 Nenzell; US Patent No. 4,232,496 Warkentin; are cited to show an assembly between two panels using a fastener.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nahid Amiri whose telephone number is (571) 272-8113. The examiner can normally be reached on 8:30-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-

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7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Nahid Amiri
Examiner
Art Unit 3679
April 18, 2007



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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3800